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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,472	01/14/2000	HIROSHI MATSUI	0010-1075-0-	5130

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

FRONDA, CHRISTIAN L

ART UNIT	PAPER NUMBER
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1652

NOTIFICATION DATE	DELIVERY MODE
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06/14/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

09/462,472

Applicant(s)

MATSUI ET AL.

Examiner

Christian L. Fronda

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-18, 20-22, 25 and 28-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-18, 20-22, 25 and 28-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/06; 12/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 1652

DETAILED ACTION

1. Claims 13-18, 20-22, 25, 28-30 are pending and under consideration in this Office Action. New rejections and new grounds of rejection are presented in the instant Office Action.
2. The objection of claims 13-18, 20-22, and 25 as reciting non-elected subject matter has been withdrawn in view of applicants' amendment to the claims filed 03/05/2007.

Claim Objections

3. Claim 39 is objected to for the misspelling of "6-phosphogluconate deydrase"; the correct spelling is "6-phosphogluconate dehydrase". Appropriate correction is requested.

Claim Rejections - 35 U.S.C. § 112, 2nd Paragraph

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 16 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
Claim 16 is a vague and indefinite since the source biological material used in the PCR amplification employing the primer pair of SEQ ID NO: 1 and SEQ ID NO: 2 has not been recited in the claim. Amending the claim to recite that *Escherichia coli* chromosomal DNA is the source material may help in overcoming the rejection.

Claim 28 is a vague and indefinite since the source biological material used in the PCR amplification employing the primer pair of SEQ ID NO: 22 and SEQ ID NO: 23 has not been recited in the claim. Amending the claim to recite that *Escherichia coli* chromosomal DNA is the source material may help in overcoming the rejection.

Art Unit: 1652

Claim Rejections - 35 U.S.C. § 112, 1st Paragraph

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 13-18, 20-22, 25, 29, and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The arguments filed 03/05/2007 citing the *Capon* Court and the *Falkner* Court to support the position that the claims comply with the written description requirement has been considered but is not persuasive. The examiner respectfully disagrees with the arguments for reasons of record as supplemented explained below.

The instant invention encompasses mutations that give rise to specific properties to the microorganism, specifically production of purine nucleosides in greater amounts compared to the corresponding wild type microorganism.

Example 8 of the specification shows that primers of SEQ ID NO: 22 and SEQ ID NO: 23 were used to amplify the *E.coli pgi* gene which encodes phosphoglucose isomerase, the *pgi* gene was mutated by removing a fragment of 500bp, and the mutated *pgi* gene transformed into *E.coli* host cells by homologous recombination, where transformed *E.coli* host cells FADRaddpgi and FADRaddeddpqi produced increase amounts of inosine compared to untransformed *E. coli* host cells (see Table 10).

The specific mutations to the gene encoding phosphoglucose isomerase resulting in a microorganism having the ability to overproduce any purine nucleoside compared to an untransformed microorganism have not been described by the specification as being well-known in the art. The specification does not disclose accessible literature sources that provide structures of the mutated and inactivated *pgi* gene transformed into *E.coli* host cells by homologous recombination which give rise to *E.coli* host cells that have acquired the property of increased production of purine nucleosides compared to the corresponding wild type microorganism.

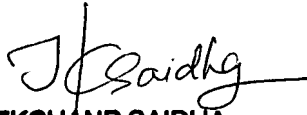
Amending the claims to recite the subject matter shown in Example 8 of the specification may overcome the rejection, where the claims specifically are amended to recite that that primers of SEQ ID NO: 22 and SEQ ID NO: 23 were used to amplify the *E.coli pgi* gene from *E. coli* chromosomal DNA which encodes phosphoglucose isomerase and that this gene is mutated and inactivated to create host cells deficient in phosphoglucose isomerase activity.

Art Unit: 1652

Conclusion

8. No claim is allowed.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian L Fronda whose telephone number is (571)272-0929. The examiner can normally be reached Monday-Friday between 9:00AM - 5:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura N Achutamurthy can be reached on (571)272-0928. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.
10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLF


TEKCHAND SAIDHA
PRIMARY EXAMINER